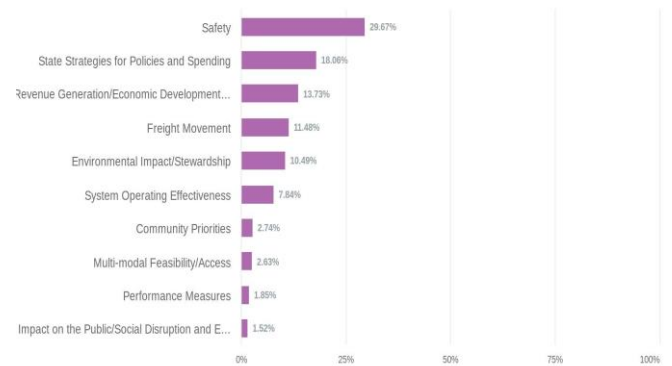


## Chapter IV- OPERATIONAL AND MANAGEMENT STRATEGIES

Innovation 2045 includes a comprehensive set of four Regional (overarching) and eight Project Level (transportation element specific) strategies to help preserve existing transportation assets, improve system performance, enhance residents' quality of life, support economic development, provide more transportation choices and protect the environment. FHWA provides information on [Transportation Systems Management and Operations](#) (TSMO) strategies. Also called Management and Operations (M&O) strategies, these are defined as "integrated strategies to optimize the performance of existing infrastructure through the implementation of multi-modal and inter-modal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system" ([TSMO](#)).

There are several operational and management strategies that can be utilized to address the variety of transportation needs within the D/KC MPO planning area, and ultimately support the goals and objectives identified in Chapter 1. Many of these strategies are supported by the **D/KC MPO's Decision Lens Project Priority Process** (explained further in chapter VI) since each proposed transportation project is assigned a quantitative value based on how that project supports 10 screening criteria (System Operating Effectiveness; Safety; Environmental Impact/Stewardship; Revenue Generation/Economic Development/Jobs and Commerce; Freight Movement; Multi-modal Feasibility/Access; Impact on the Public/Social Disruption and Economic Justice; Community Priorities; State Strategies for Policies and Spending; and Performance Measures). If the project supports multiple screening criteria, the more quantitative value the project can receive. The higher the quantitative value received, the

higher priority the project receives regarding funding.



### **D/KC MPO Overarching Strategies**

The following four overarching strategies and eight project level (transportation element) strategies are all linked to one another through the D/KC MPO Decision Lens Project Priority Process; support our Federal and State partners strategies; and integrate our Local partners economic and land use strategies.

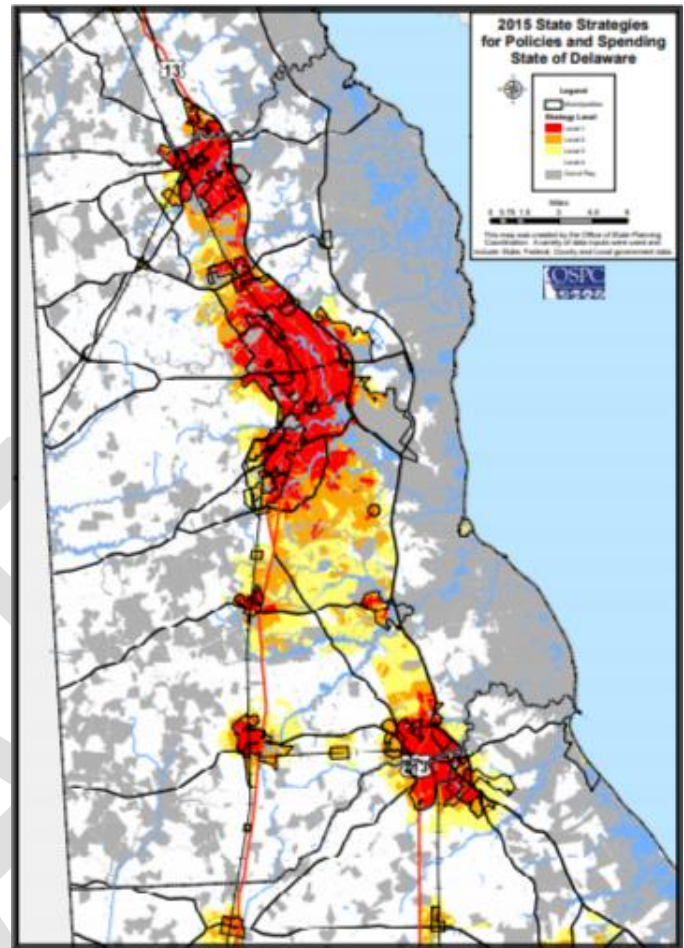
### ***Leverage D/KC MPO Partner Comprehensive Land Use Plans and the 2020 Delaware State Strategies for State Policies and Spending***

As previously described in Chapter 1, Comprehensive planning is a process that determines community goals and aspirations in terms of community development which results in a comprehensive plan expressing and regulating public policies on transportation, utilities, land use, recreation, and housing. Municipal and County Comprehensive Plans in Delaware are updated every ten years and must be "certified" by the Governor of Delaware through the Delaware Office of State Planning Coordination (OSPC). When conducting our Innovation 2045 MTP update, we reviewed all twenty (20) Kent County Municipal Comprehensive Plans as well as Kent County's Comprehensive Plan to see where we could link common goals and objectives while drafting our Innovation 2045 MTP goals and objectives as well as list financially responsible projects which support our MPO partners comprehensive plans. Part of this strategy will be to continuous monitor changes

to our D/KC MPO Partners Comprehensive Plans regarding transportation element changes which may be contrary to DeIDOTs 2019 Innovation in Motion, the D/KC MPO's Innovation 2045 goals, objectives, and performance measures, and Delaware's Office of State Planning Coordination's (OSPC) [2020 Strategies for State Policies and Spending](#).

The purpose of the Strategies for State Policies and Spending (aka the State Strategies) is to coordinate land-use decision-making with the provision of infrastructure and services in a manner that makes the best use of our natural and fiscal resources. The State Strategies are the way the State coordinates with local land use by providing map series of the State identifying areas of the state as "Investment Levels" ranging from urban (Level 1) to rural (Level 4) areas. It also includes areas considered Out-of-Play. D/KC MPO Partners should consider these Levels 1 to 4 and out-of-play geographic areas when developing their Comprehensive Plans transportation elements since state funding and policy are different within each state strategies level. The State Strategies map helps coordinate local land-use decisions, while the bulk of infrastructure (e.g., roads and schools) and services (e.g., emergency services and social services) that support land-use decisions are funded by the state. Kent County local governments using the State Strategies helps create a unified view toward growth and preservation priorities that all governments can use to allocate resources. In fact, DeIDOTs 2019 Innovation in Motion Long Range Transportation Plan shows how the state strategies will be used in their long range transportation financing by requiring transportation investments to reflect state strategy priorities and that "growth-related infrastructure will be directed towards level 1 and 2 areas while level 3 and 4 will focus on preserving and protecting open space, agriculture, and a rural legacy" (DeIDOT, 2019 P. I-79 and II-12). Innovation 2045 utilizes the State Strategies in the transportation project prioritization process as the State Strategies help link State and Local land use

initiatives which affect transportation systems in Kent County.



This strategy includes reviewing updated comprehensive plans from our D/KC MPO Partners to ensure transportation elements within those plans can be supported by Innovation 2045 goals, objectives, and performance measures and where applicable, leverage existing transportation networks/systems (i.e. Roads) in lieu of building new ones contrary to the 2020 Delaware Strategies for State Policies and Spending.

### ***Support Economic Development***

Where supported by the 2020 Strategies for State Policies and Spending and local governments comprehensive plan, support transportation project planning efforts geared toward enhancing economic development opportunities in conjunction with efforts to create quality places that support a range of lifestyle and transportation choices,

promote increased density through mixed-use development, and use a centers-and-corridors strategy in planning efforts. This strategy also supports DeIDOT's Long Range Goal, "Economic Vitality" which requires "an excellent transportation network that meets the needs of a diverse and growing economy" (DeIDOT, 2019, P. ES-3). This strategy has two parts: Transportation Project Funding and Employer Incentives.

Transportation Project Funding was briefly described at the beginning of this chapter. Examples of transportation projects supporting economic development could be any existing road improvements, proposed new local road, new bus or bus route, multi-modal paths or facilities which directly supports the economic development project (new business park, opportunity zones, employment centers, etc.). The second part of this strategy encourages employers to incentivize best transportation practices such as increased ride-sharing efforts (carpooling and van-pooling), and increased multi-modal use (transit, bike, or walking). These can be based on informal arrangements between individuals or formally arranged through ride-matching services. "Available research indicates that improving awareness, trust, and willingness to ride with strangers, as well as flexibility in scheduling, may help to increase carpool use" (El Paso MPO 2045 MTP. P 4-1).

### ***Foster Complete Communities***

Similar to the first strategy listed above, Complete Communities is a program supported by the Delaware Office of State Planning Coordination and DeIDOT. The program was designed for DeIDOT by the University of Delaware to "help local communities to better plan for and build attractive, inclusive, efficient, healthy and resilient places" (DeIDOT, 2019. P. II-15). This program is similar to the US Department of Transportation (DOT), complete streets program that encompasses many approaches to planning, designing, and operating roadways and rights-of-way with all users in mind to make the transportation network safer and more

efficient (US DOT, [Website](#)). Complete Communities program provides land-use planning tools and techniques, which uses complete streets as one of five elements of a complete community. DeIDOT's 2019 Innovation in Motion uses the Complete Communities program as part of their long range transportation plan implementation strategy (DeIDOT, 2019. P. II-6 and II-25) and as such, the D/KC MPO will facilitate the use of complete communities as one of the Innovation 2045 operation and management strategies.

Although the D/KC MPO has no legislative authority over local governments' land-use decisions, we work closely with member jurisdictions to explore and evaluate land use decisions on the Kent County transportation network. However, the D/KC MPO is permitted to review land use plans submitted to the Delaware Office of State Planning Coordination through their [Preliminary Land Use Service](#) (PLUS). PLUS provides an opportunity for state agencies to review major land use change proposals prior to submission to local governments and in this process. The D/KC MPO can comment on potential transportation impacts from these plans by also recommending use of Complete Communities planning practices as available on the UD Complete Communities website and as supported by DeIDOT.

### ***Pursue Innovative Transportation Systems Preservation***

As described in the 2019 DeIDOT LRTP (Innovation in Motion), system management and operation as well as system preservation are listed as two of DeIDOT's ten goals (DeIDOT, 2019. P. ES-3). As population and employment centers increase, our roadway network can become constrained during typical commuter times, decreasing the LOS standard for those roads and potentially adding to poor air quality as more motor vehicles idle in stop and go traffic. Before considering adding additional lanes to existing roadways as a technique to increase traffic flow, the D/KC MPO supports the leveraging of technology as a means to preserve our current

roadway network. The DeIDOT [Integrated Transportation Management System](#) (ITMS) leverages new technologies such as traffic control devices, closed-circuit cameras along with Intelligent Transportation System (ITS) devices (i.e. wireless radio, Bluetooth and Wi-Fi, microwave systems and fiber optics) to improve traffic operations and safety (DeIDOT, 2019, P. II-37).

This strategy includes reviewing motor vehicle road construction upgrades (i.e. road widening, traffic circles, etc..) and Transportation Improvement District (TID) projects proposed by D/KC MPO Partners. These reviews will assess whether or not current technological efficiencies and innovations were considered and evaluated before concluding that road construction upgrades are required.

### **D/KC MPO Project Level (Transportation Element) Strategies**

As described in the Innovation 2045 project priority process and listed in the financially responsible projects chapter, the D/KC MPO considers Roadways, Studies, Multi-modal, Bicycle, Pedestrian, Transit, Freight, and Safety as specific transportation elements which may receive transportation project funding. Identified projects in these eight categories are found in chapter VI and are listed as potential near term, mid-term, long term, and aspiration projects.

| 2021 MTP Project Count as of 5 May 2020 |                     |                    |                     |
|---|---------------------|--------------------|---------------------|
|   | Near Term 2021-2026 | Mid Term 2027-2034 | Long Term 2035-2045 |
| Roadway                                 | 19                  | 23                 | 0                   |
| Studies                                 | 0                   | 0                  | 45                  |
| Multi-Modal                             | 9                   | 9                  | 0                   |
| Bicycle                                 | 9                   | 11                 | 0                   |
| Pedestrian                              | 4                   | 3                  | 0                   |
| Transit                                 | 3                   | 0                  | 0                   |
| Freight                                 | 5                   | 5                  | 0                   |
| Safety                                  | 5                   | 0                  | 0                   |
| <b>Total</b>                            | <b>54</b>           | <b>51</b>          | <b>45</b>           |

The following information describes how each of the eight transportation element strategies will be implemented.

#### ***Roadways***

The overall roadway strategy is to preserve the existing transportation system by focusing investments on upgrades to alternative routes which provide local roadway connections that increase connectivity; provide alternative access, particularly for local motorists; and ensure local roads are upgraded consistent with future growth as shown in D/KC MPO partners comprehensive plans, long range transportation plans, transportation planning studies, and the state strategies. Additionally, current and predicted Level of Service (LOS) on Kent County roadways must be considered when identifying roadway upgrades. Roadway upgrades are often localized enhancements (i.e. individual intersection) and not necessarily a system-wide improvement (i.e. addition of shoulders beyond the limits of new development) but nonetheless, are typically identified after a period of monitoring which results in potential improvements identified to keep up with projected traffic volumes. As with the other seven transportation elements, the strategy used for roadway project selection will be based on highest quantitative scoring after applying the 10 screening criteria to specific roadway projects.

#### ***Studies***

Proposed transportation studies identified within Innovation 2045 or through the annual Unified Planning Work Program (UPWP) will be evaluated and ranked using the D/KC MPO Decision Lens process. In addition to specific study categories classified as Bicycle and Pedestrian, Parking, Transportation Corridor, Transportation Improvement Districts, Transit, Freight (Rail or Truck), Performance Measures, and Miscellaneous Transportation studies, the D/KC MPO created a standard process when recommending transportation studies or plans be funded with State and Federal money. All study proposals must support the most recent D/KC MPO Metropolitan Transportation Plan and are classified as being Priority (studies specifically mentioned in the MTP), Secondary (studies which support specific goals within the MTP), or Tertiary (studies support D/KC MPO partners comprehensive plans) projects.

Additionally, following recommendations from [FHWA Planning and Environmental Linkages](#) (PEL), the D/KC MPO sponsored studies should conclude with recommended courses of action and a [Purpose and Need statement](#) that will help DelDOT engineers in their National Environmental Policy Act (NEPA) documentation. This strategy helps ensure consistency and linkage with State, Local, and D/KC MPO long range planning goals and objectives.

### **Multi-modal**

These are projects which support two or more different transportation modes (element). For example, a pathway which can be used by bicyclists and pedestrians. There could also be multi-modal projects within specific Project Level (Transportation Element) Strategies such as in **Freight** with a truck and rail terminal facility; **Transit** with bike rack on new electric buses and bicycle parking at transit stops; **Bicycle** with and **Roadway** with bike lanes and pedestrian crosswalks included with road widening projects; etc... Other examples might be **community projects** including two or more of the following combinations: bus stops, park and ride facilities, sidewalk/crosswalk safety improvements, and bicycle lanes/route designations; **street projects** with street lighting, sidewalk enhancement, and pedestrian sidewalk connections, crosswalks, pedestrian traffic signals, and pedestrian signs; and **connectivity projects** to utilize existing transportation assets, including but not limited to: improved signage, access roads, development or support of an integrated transportation corridor and/or improvements to the productivity, efficiency and security that support goods movement.

### **Bicycle**

As stated in the D/KC MPO 2017 Regional Bike Plan, the vision for Kent County is to “*become a place where many people, young and old, use bicycles for transportation and/or recreation*” (D/KC MPO, 2017, P. 6). In order to facilitate this vision, the D/KC MPO maintains two goals: Create an effective and safe bicycle transportation system;

and Make bicycle riding a viable transportation option for persons of all ages in Kent County. This vision is also supported by several existing bicycle related policies, plans, and initiatives such as [DelDOT's Blueprint for a Bicycle-Friendly Delaware; Healthy and Transit-Friendly Development Act; First State Trails and Pathways Initiative; DelDOT's Complete Streets Policy; DelDOT's Safe Routes to School Program](#); and currently being drafted the City of Dover and City of Milford's Bike and Pedestrian Plans. Suffice it to say that there are many current as well as future policies, plans, and initiatives affecting proposed bicycle projects as well as many D/KC MPO partners who are pursuing bike projects. Use of interactive geographic information system (GIS) mapping can facilitate a more effective and coordinated effort in identifying low-stress bike projects. Additionally, the D/KC MPO should leverage bike planning assets within DelDOT who implement the Blueprint for a Bicycle-Friendly Delaware as well as the FHWA staff who implement the 2019 FHWA [Bikeway Selection Guide](#) (design flexibility and connected, safe, and comfortable bicycle networks).

The strategy continuing out to 2045 will be to leverage GIS capabilities to more effectively document existing and proposed D/KC MPO Partners bike plan projects and studies against DelDOT and FHWA policies to ensure a well coordinated implementation of bike projects supporting a safe and low-stress bicycle network within Kent County.

### **Pedestrian**

The D/KC MPO supports transportation projects which help improve the quality of life throughout Kent County by promoting safe and convenient pedestrian travel that enhances personal mobility, accessibility and fitness. Many times, pedestrian transportation projects (sidewalk connections; HAWK (High-Intensity Activated Crosswalk) Pedestrian Beacon; walkways; grade separated crosswalks, etc...) are incorporated into bicycle or road projects and appear as multi-modal projects rather than separate pedestrian projects.

Regardless, the overall goal is to improve accessibility for all pedestrians, including older adults and people with disabilities, to make Kent County more walk-able and accessible for people of all ages and abilities.

The Innovation 2045 Pedestrian strategy includes support for transportation improvements by investigating ways to get people involved and interested in walking as “complete communities” initiatives via public awareness to facilitate acceptance of walking as a viable means of transportation. Funding will be directed to pedestrian transportation projects in areas of pedestrian risk to address pedestrian safety in order to reduce pedestrian injuries and fatalities.

### ***Transit***

The strategy used in the 2017 D/KC MPO MTP was to, “adjust the transit system to address local needs.” Basically, adjust transit operations along any one of fourteen routes based on usage (ridership) and results from an Origin-Destination Study. Additionally, the last [Kent County Transit Transportation Plan](#) written was in 2010 and should be updated to account for land use, economic, and population changes in Kent County. These changes are documented in current Kent County Municipal Comprehensive Plans, D/KC MPO Metropolitan Transportation Plans, DelDOT’s Long Range Transportation Plan, and the Federal Transit Administration (FTA) guidance. For example, the FTA [Transportation Planning website](#) provides transit planning information such as [Transit-oriented development](#), which includes “a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walk-able, mixed-use development near transit attracts people and adds to vibrant, connected communities”. This is very similar to FHWA’s “Complete Streets” and DelDOT’s “Complete Communities”.

In addition to an updated Kent County Transit Transportation Plan, the overall transit strategy for Innovation 2045 will focus on land use and technological changes. Transit Oriented

Development goals will be considered in transportation project funding priority selection as well as new bus technologies such as electric and natural gas power.

### ***Freight***

The 2017 D/KC MPO MTP had one freight strategy which was to implement the recommendations from the [Delmarva Freight Plan](#) (DFP). These recommendations included four road upgrades, four virtual weigh stations; and two area studies. In addition to the specific projects recommended for Kent County in the DFP, the Innovation 2045 freight strategy will also focus on Land Use issues. Specifically, “land use policies, decisions, and related factors which influence the potential relationships or conflicts that may occur between existing/future developments and the freight movements that must serve or pass by the local communities” (DFP, P 136). Additionally, in support of economic growth and development opportunities, the D/KC MPO’s planning interests include the preservation of critical freight infrastructure and freight oriented land uses in key industrial areas and adjacent to rail corridors (DFP, P. 136).

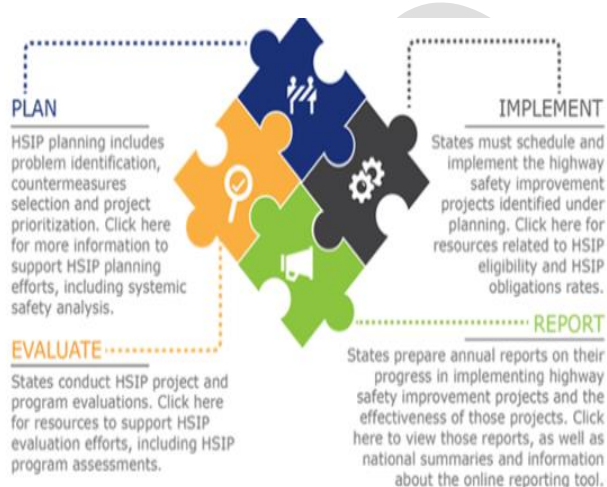
To assist practitioners with freight planning on a regional basis, the University of Delaware facilitates a winter and summer Delmarva Freight Summit. These summits provide valuable information from the freight industry members. For example, [Trucking’s Final Mile presentation](#) by Lee Derrickson (Delaware Motor Transport Association, Inc.) provides quantitative information regarding truck route selection and land use issues affecting truck deliveries final mile to commodity destinations.

The freight transportation element strategy includes remaining an active partner in the winter and summer Delmarva Freight Summits. Additionally, the D/KC MPO will continue implementing elements of the DFP in addition to implementing projects identified in D/KC MPO freight studies: 2018 D/KC MPO Rail/Freight Study; 2019 Kent County East / West Truck Freight Route Feasibility Study; 2019

City of Harrington Inter-modal Freight Terminal Feasibility Study, and the Dover Freight Study.

## Safety

Although listed as the eighth project level (transportation element) strategy, safety is the number one strategy. Safety initiatives focus on improvements to reduce crashes. As mentioned in the 2017 D/KC MPO MTP Update, DeIDOT has a very active Highway Safety Improvement Program (HSIP) which follows the FHWA Highway Safety Improvement Program (HSIP). The FHWA HSIP is a “core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance” (<https://safety.fhwa.dot.gov/hsip/>). The following image is from the FHWA HSIP website and helps illustrate DeIDOT’s HSIP requirements.



DeIDOT continually reviews crash data and crash rates throughout the state. Through the HSIP, the DeIDOT identifies roadway segments and intersections that have higher than average crash rates, notes the primary contributing circumstances for the crashes, and develops recommendations to address the identified safety needs.

Recommendations can typically range from signing and striping improvements to major roadway widening. The HSIP, which is a Federally-funded

program, is DeIDOT’s primary means of identifying and addressing safety needs. DeIDOT publishes an annual **Highway Safety Report** which provides an overview of strengths, efforts, challenges and legislative issues provide a comprehensive review of the year's success stories. DeIDOT also publishes a **Highway Safety Plan** which provides an overview of Delaware's highway safety priority areas; goals and objectives; guidelines for applying for federal funds and brief description of each project which will be implemented during the planning year and the amount of federal highway safety funds that have been allocated for that project). Both documents can be found on the Delaware Office of Highway Safety website (<https://ohs.delaware.gov/reports.shtml> ).

In addition to having all D/KC MPO projects and studies having a safety screening criteria element in the prioritization and selection process (see chapter VI, Decision Lens), specific safety projects are listed in Chapter VI and DeIDOT’s Capital Transportation Plan (CTP) and CTP Development Plan. As part of DeIDOT’s CTP FY20 - FY27 Development Plan, a “spend plan” is updated monthly and is adjusted as the fiscal year progresses. As of June 2020, DeIDOT lists 8 Kent County Safety Projects in the FY20-26 Development Plan. Projects that are in later years are projections until they are officially approved as part of the STIP. Therefore, the published CTP and approved STIP both list the approved safety projects that are part of DeIDOT’s CTP Development Plan.

The Strategy is to support DeIDOT’s Highway Safety Plan and annual Report, include safety criteria in D/KC MPO Performance Measures, as well as maintaining safety as the most important screening criteria when considering road safety projects that are expected to help Delaware and Kent County reduce the number of fatalities and serious injuries by 50% by 2035.